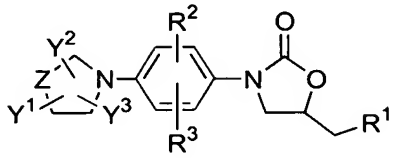
IN THE CLAIMS

1. (previously presented) A compound of the formula (I)



(I)

wherein

R^1 represents halo, azido, isothiocyanate, thioalcohol, OR^4, NHR^4 or $N(R^4)_2$, where R^4 represents hydrogen atom, or substituted or unsubstituted groups selected from acyl, thioacyl, $(C_1\text{-}C_6)$ alkoxycarbonyl, $(C_3\text{-}C_6)$ ycloalkoxythiocarbonyl, $(C_2\text{-}C_6)$alkenyloxycarbonyl, $(C_2\text{-}C_6)$alkenylcarbonyl, aryloxycarbonyl, $(C_1\text{-}C_6)$alkoxythiocarbonyl, $(C_2\text{-}C_6)$ alkenyloxythiocarbonyl, aryloxythiocarbonyl, -C(=O)-C(=O)-alkyl, -C(=O)-C(=O)-aryl, -C(=O)-C(=O)-alkoxy, -C(=O)-C(=O)-aryloxy, -(C=S)-S-alkyl, -(C=S)-NH_2, -(C=S)-NH-alkyl, -C(=S)-N-$(alkyl)_2$, -C(=S)-NH-alkenyl, (C=S)-(C=O)-alkoxy, -(C=S)-(C=O)-aryloxy, -C(=S)-O-(C=O)-alkyl, C(=S)-C(=S)-alkyl, -C(=S)-C(=S)-aryl, thiomorpholinylthiocarbonyl or pyrrolidinylthiocarbonyl;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_1\text{-}C_6)$cycloalkyl, $(C_1\text{-}C_6)$alkoxy, aryl, aralkyl, aryloxy, $(C_1\text{-}C_6)$alkylcarbonyl, arylcarbonyl, $(C_1\text{-}C_6)$ lkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from $(C_1\text{-}C_6)$alkyl, hydroxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$ alkoxycarbonyl, carboxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkylsulfonyl, $(C_1\text{-}C_6)$

alkylcarbonylamino(C_1-C_6) lkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates.

2. (Original) The compound according to claim 1, wherein the substituents on R^4 are selected from halogen, hydroxy, amino, monoalkylamino, dialkylamino, cyano, nitro, alkoxy, aryl, hydroxyaryl, pyridyl, hydroxyalkyl, alkoxyaryl or carboxyl and its derivatives.

3. (Original) The compound according to claim 1, wherein the substituents on R^b are selected from hydroxy, halogen, pyrrolidinylthiocarbonyl, nitro, amino, alkoxy, carboxy or cyano.

4. (Original) The compound according to claim 1, wherein the substituents on Y^2 and Y^3 are selected from hydroxy, nitro, cyano, amino, *tert*-butyldimethylsilyloxy (TBSO), halogen, (C_1-C_6)alkyl, (C_1-C_6)alkoxy, (C_3-C_6) cycloalkyl, aryl, benzyloxy, acyl, carboxyl or acyloxy groups.

5. (Original) The compound according to claim 1, wherein the cyclic structure formed by Y^2 and Y^3 is selected from substituted or unsubstituted benzene, pyridine, pyrrolidine, furan, thiophene, morpholine, piperazine or pyrrole.

6. (previously presented) A compound of the formula (I) as defined according to claim 1, which is selected from:

(5R)-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-5-hydroxymethyl-1,3-oxazolan-2-one or its salts;

(5R)-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-5-hydroxymethyl-1,3-oxazolan-2-one or its salts;

(5R)-3-{3-fluoro-4-[3-(4-methoxybenzyl)-4-oxo-1-imidazolidinyl]phenyl}-5-hydroxymethyl-1,3-oxazolan-2-one or its salts;

(5R)-3-[3-fluoro-4-(3-methyl-2-oxo-1-imidazolidinyl)phenyl]-5-hydroxymethyl-1,3-oxazolan-2-one or its salts;

(5R)-5-hydroxymethyl-3-[4-(3-methyl-2-oxo-1-imidazolidinyl) phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-5-hydroxymethyl-3-[4-(3-benzyl-2-oxo-1-imidazolidinyl) phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-3-[3-fluoro-4-(2-oxo-3-phenyl-1-imidazolidinyl)phenyl]-5-hydroxymethyl-1,3-oxazolan-2-one or its salts;

(5R)-3-{3-fluoro-4-[3-(fluorophenyl)-2-oxo-1-imidazolidinyl]phenyl}-5-hydroxymethyl-1,3-oxazolan-2-one or its salts;

(5R)-azidomethyl-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl) phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-5-azidomethyl-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-5-azidomethyl-3-[3-fluoro-4-(3-phenyl-2-oxo-1-imidazolidinyl)phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-5-azidomethyl-3-{3-fluoro-4-[3-(4-fluorophenyl)-2-oxo-1-imidazolidinyl]phenyl}-1,3-oxazolan-2-one or its salts;

(5R)-aminomethyl-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-5-aminomethyl-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-1,3-oxazolan-2-one or its salts;

(5R)-5-aminomethyl-3-[3-fluoro-4-(3-benzyl-

4-oxo-1-imidazolidinyl)phenyl]-1,3-oxazolan-2-one or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}acetamide or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-benzyl-4-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}acetamide or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}acetamide or its salts;

N1-{(5S)-3-[4-(3-methyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} acetamide or its salts;

N1-{(5S)-3-[4-(3-benzyl-2-oxo-1-imidazolidinyl) phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} acetamide or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-phenyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} acetamide or its salts;

N1-((5S)-3-{3-fluoro-4-[3-(4-fluorophenyl)-2-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)acetamide or its salts;

(5S)-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-5-(1-thioxoethylamino methyl)-1,3-oxazolan-2-one or its salts;

(5S)-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-5-(1-thioxoethylamino methyl)-1,3-oxazolan-2-one or its salts;

(5S)-3-[3-fluoro-4-(3-phenyl-2-oxo-1-imidazolidinyl)phenyl]-5-(1-thioxoethylamino methyl)-1,3-oxazolan-2-one or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}methylcarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}ethylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}-1-propylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}methylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-2-thioxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}-2-propylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-4-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}methylthiocarbamate or its salts;

N1-{(5S)-3-[4-(3-methyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} methylthiocarbamate or its salts;

N1-{(5S)-3-[4-(3-methyl-4-oxo-1-imidazolidinyl) phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} methylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}methylthiocarbamate or its salts;

N1-{(5S)-3-[4-(3-benzyl-2-oxo-1-imidazolidinyl) phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} methylthiocarbamate or its salts;

N1-{(5S)-3-[4-(3-benzyl-2-oxo-1-imidazolidinyl) phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl} ethylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-phenyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}methylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-phenyl-2-oxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}ethylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-(4-fluorophenyl)-2-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl) methylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-(4-fluorophenyl)-2-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl) ethylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-(4-fluorophenyl)-2-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)-2-propylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-methoxymethyl-4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl) methylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-benzyl-4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)methylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-benzyl-4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)ethylthiocarbamate or its salts;

N1-((5S)-3-{4-[4-oxo-1-imidazolidinyl] phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)-(N,N-dimethylamino) ethylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-(4-methoxybenzyl)-4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl) methylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-benzyl-4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)isopropylthiocarbamate or its salts;

N1-((5S)-3-{3-fluoro-4-[3-hydroxymethyl-4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl) methylthiocarbamate or its salts;

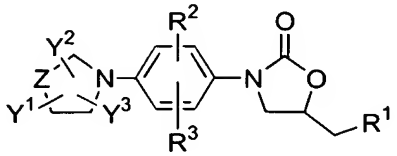
N1-((5S)-3-{3-fluoro-4-[4-oxo-1-imidazolidinyl]phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl) methylthiocarbamate or its salts;

N1-{(5S)-3-[3-fluoro-4-(3-methyl-4-thioxo-1-imidazolidinyl)phenyl]-2-oxo-1,3-oxazolan-5-ylmethyl}methylthiocarbamate or its salts; and

N1-((5S)-3-{4-[4-oxo-1-imidazolidinyl] phenyl}-2-oxo-1,3-oxazolan-5-ylmethyl)-(N,N-dimethylamino) ethylthiocarbamate hydrochloride.

7. (previously presented) A compound according to claim 1, wherein the pharmaceutically acceptable salt is selected from the group consisting of Li, Na, K, Ca, Mg, Fe, Cu, Zn, or Mn; salts of organic bases, chiral bases, natural amino acids, unnatural amino acids, substituted amino acids, guanidine, substituted guanidine salts; ammonium, substituted ammonium salts, aluminum salts and acid addition salts.

8. (previously presented) A process for the preparation of the compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents hydrogen atom;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1$-$C_6)$alkyl group, halo$(C_1$-

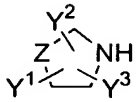
C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6) cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

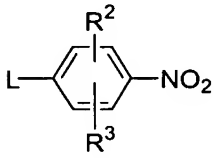
Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting a compound of formula (III)



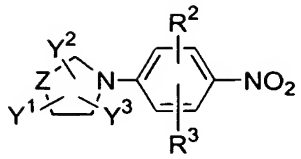
(III)

where Y^1, Y^2, Y^3 and Z are as defined above, with a compound of formula (IV)



(IV)

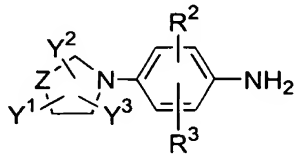
where L represents a leaving group; R^2 and R^3 are as defined above, to produce a compound of formula (V)



(V)

where Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above,

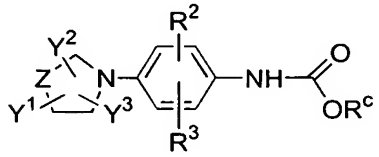
(ii) reducing the compound of formula (V) to produce a compound of formula (VI)



(VI)

where Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above,

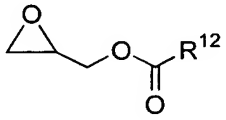
(iii) reacting the compound of formula (VI) with alkylchloroformate, to produce a compound of formula (VII)



(VII)

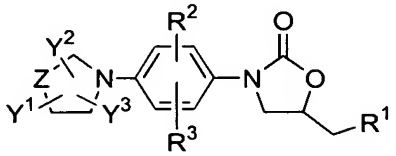
where R^c represents (C_1-C_8)alkyl group group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above,

(iv) reacting the compound of formula (VII) with a compound of formula (VIII)



(VIII)

where R^{12} represents (C_1-C_3)alkyl group in the presence of a base to produce a compound of formula (I)

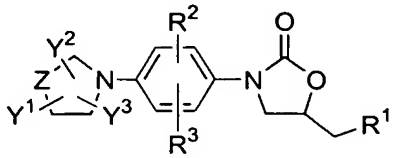


(I)

where R^1 represents hydroxy; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above,

(v) reacting the compound of formula (I) with alkylsulfonyl chloride or aryl sulfonyl chloride to produce a compound of

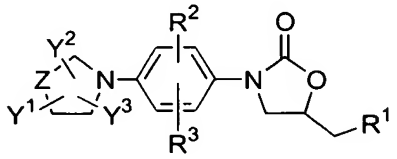
formula (I), where R^1 represents alkyl sulfonyl or aryl sulfonyl, and reacting with NaN_3 to produce compound of formula (I)



(I)

where R^1 represents azido group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above and

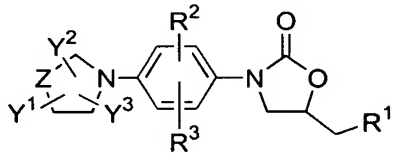
(vi) reducing the compound of formula (I) where R^1 represents azido group, to produce a compound of formula (I)



(I)

where R^1 represents NHR^4 wherein R^4 represents hydrogen atom; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above.

9. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents hydroxy;

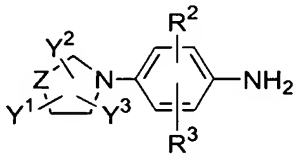
R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_1\text{-}C_6)$ cycloalkyl, $(C_1\text{-}C_6)$alkoxy, aryl, aralkyl, aryloxy, $(C_1\text{-}C_6)$alkylcarbonyl, arylcarbonyl, $(C_1\text{-}C_6)$ alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

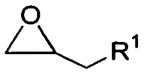
Y^2 and Y^3 when present on adjacent carbon atoms together may also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting the compound of formula (VI)



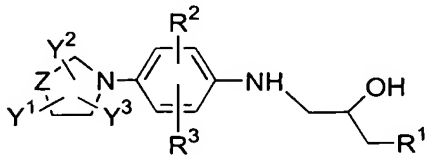
(VI)

where Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with a compound of formula (IX)



(IX)

where R^1 represents hydroxy, to produce a compound of formula (X)

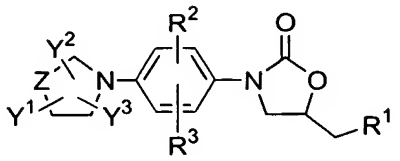


(X)

where R^1 represents hydroxy; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, and

(ii) carbonylating the compound of formula (X) with a carbonylating agent to produce the compound of formula (I) where R^1 represents hydroxy; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above.

10. (previously presented) A process for the preparation of compound of the formula (I)



(I)

where

R^1 represents azido;

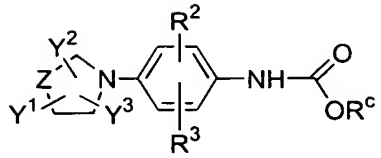
R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1$-$C_6)$alkyl group, halo$(C_1$-$C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1$-$C_6)$ alkyl group, or halo$(C_1$-$C_6)$alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1$-$C_6)$alkyl, $(C_2$-$C_6)$alkenyl, $(C_1$-$C_6)$ cycloalkyl, $(C_1$-$C_6)$alkoxy, aryl, aralkyl, aryloxy, $(C_1$-$C_6)$alkylcarbonyl, arylcarbonyl, $(C_1$-$C_6)$alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from $(C_1$-$C_6)$alkyl, hydroxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkoxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$ alkoxycarbonyl, carboxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkylsulfonyl, $(C_1$-$C_6)$ alkylcarbonylamino$(C_1$-$C_6)$ alkyl, arylcarbonylamino$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$ alkylcarbonyloxy$(C_1$-$C_6)$alkyl, amino$(C_1$-$C_6)$alkyl, mono$(C_1$-$C_6)$alkylamino, di$(C_1$-$C_6)$alkylamino, arylamino, $(C_1$-$C_6)$alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

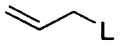
Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting a compound of formula (VII)



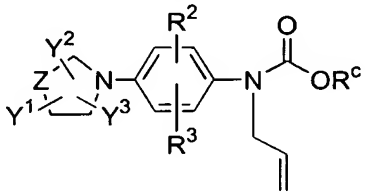
(VII)

where R^c represents (C_1-C_8)alkyl group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with a compound of formula (XI)



(XI)

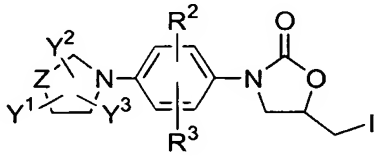
where L represents a leaving group; to produce a compound of formula (XII)



(XII)

where R^c, Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above,

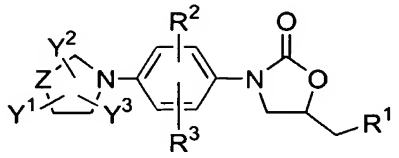
(ii) converting the compound of formula (XII) defined above to a compound of formula (XIII)



(XIII)

where Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, and

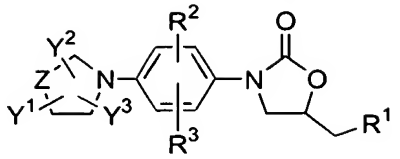
(iii) converting the compound of formula (XIII) defined above to a compound of formula (I) by reacting with organic or inorganic azide



(I)

where R^1 represents azido group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above.

11. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents azido group;

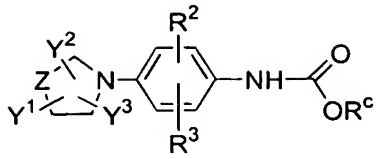
R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6) cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

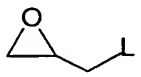
Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting a compound of formula (VII)



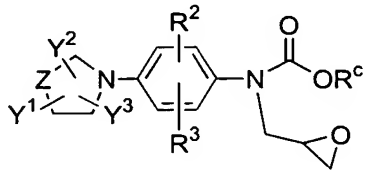
(VII)

where R^c represents (C_1-C_8)alkyl group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with a compound of formula (XVII)



(XVII)

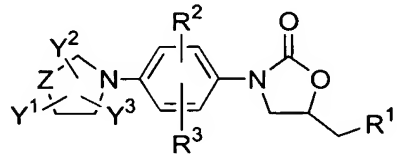
where L represents leaving group; to produce a compound of formula (XVIII)



(XVIII)

where R^c, Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, and

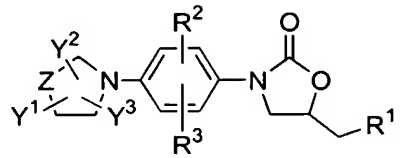
(ii) converting the compound of formula (XVIII) defined above to a compound of formula (I), by reacting with an organic or an inorganic azide,



(I)

where R^1 represents azido group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above.

12. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents hydroxy group;

R^2 and R^3 are same or different and

independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-

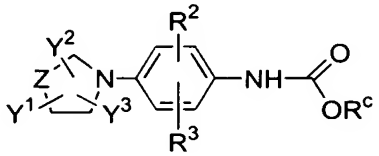
C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6) cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

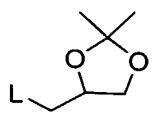
Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting a compound of formula (VII)



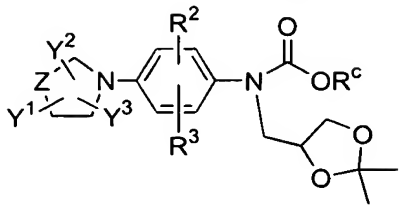
(VII)

where R^c represents (C_1-C_8)alkyl group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with a compound of formula (XIV)



(XIV)

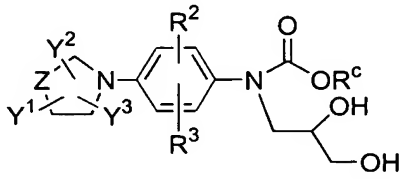
where L represents a leaving group; to produce a compound of formula (XV)



(XV)

where R^c represents $(C_1\text{-}C_8)$alkyl group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above,

(ii) hydrolysing the acetonide moiety in the compound of formula (XV) to produce a compound of formula (XVI)

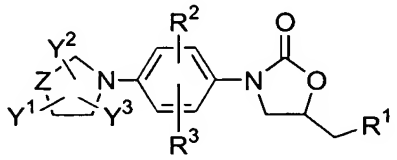


(XVI)

where R^c, Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, and

(iii) cyclising the compound of formula (XVI) with or without a base to a compound of formula (I), where R^1 represents hydroxy group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above.

13. (previously presented) A process for the preparation of compound of the formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents acetyl group;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

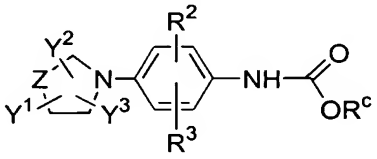
Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_1\text{-}$

C_6)cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

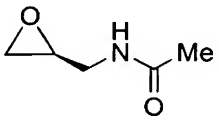
Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting a compound of formula (VII)



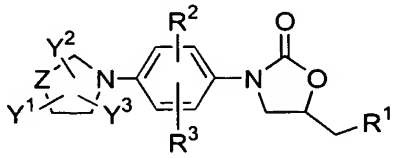
(VII)

where R^c represents (C_1-C_8)alkyl group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with a compound of formula (XIX)



(XIX)

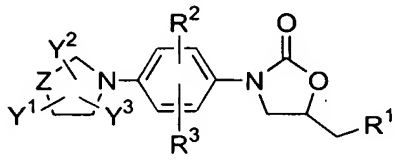
to produce a compound of formula (I)



(I)

where R^1 represents NHR^4, wherein R^4 represents acetyl group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above.

14. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents formyl group;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1$-$C_6)$alkyl group, halo$(C_1$-$C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1$-$C_6)$alkyl group, or halo$(C_1$-$C_6)$alkyl;

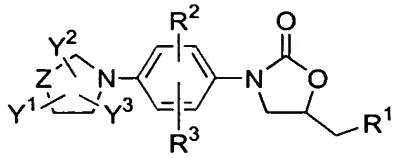
Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1$-$C_6)$alkyl, $(C_2$-$C_6)$alkenyl, $(C_1$-$C_6)$ cycloalkyl, $(C_1$-$C_6)$alkoxy, aryl, aralkyl, aryloxy, $(C_1$-$C_6)$alkylcarbonyl, arylcarbonyl, $(C_1$-$C_6)$alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from $(C_1$-$C_6)$alkyl, hydroxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkoxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$ alkoxycarbonyl, carboxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkylsulfonyl, $(C_1$-$C_6)$ alkylcarbonylamino$(C_1$-$C_6)$ alkyl, arylcarbonylamino$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$ alkylcarbonyloxy$(C_1$-$C_6)$alkyl, amino$(C_1$-$C_6)$alkyl, mono$(C_1$-$C_6)$alkylamino, di$(C_1$-$C_6)$alkylamino, arylamino, $(C_1$-$C_6)$alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two

hetero atoms; which comprises: formulating the compound of formula (I) where R^1 represents NHR^4 wherein R^4 represents hydrogen and Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, by using alkylformate.

15. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents –C(=O)-R^{4a}, wherein R^{4a} represents (C_1-C_6)alkyl, (C_1-C_6)alkoxy, (C_2-C_6)alkenyl, halo(C_1-C_6)alkyl, aryloxy, (C_2-C_6)alkenyloxy, aryloxycarbonyl or (C_1-C_6)alkoxycarbonyl;

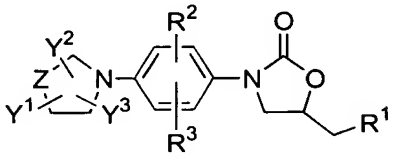
R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6) cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; which comprise: acetylating the compound of formula (I) where R^1 represents NHR^4 wherein R^4 represents hydrogen; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, by using a halide.

16. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents acetyl group;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

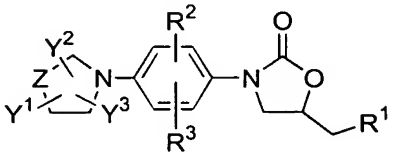
Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_1\text{-}C_6)$ cycloalkyl, $(C_1\text{-}C_6)$alkoxy, aryl, aralkyl, aryloxy, $(C_1\text{-}C_6)$alkylcarbonyl, arylcarbonyl, $(C_1\text{-}C_6)$alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from $(C_1\text{-}C_6)$alkyl, hydroxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$ alkoxycarbonyl, carboxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkylsulfonyl, $(C_1\text{-}C_6)$ alkylcarbonylamino$(C_1\text{-}C_6)$ alkyl, arylcarbonylamino$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$ alkylcarbonyloxy$(C_1\text{-}C_6)$alkyl, amino$(C_1\text{-}C_6)$alkyl, mono$(C_1\text{-}C_6)$alkylamino,

di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises: reacting compound of formula (I) where R^1 represents azido group; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with thioacetic acid.

17. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents –C(=S)-R^{4b}, wherein R^{4b} represents (C_1-C_6)alkyl, halo(C_1-C_6)alkyl, -C(=O)-(C_1-C_6) alkoxy, -C(=O)-aryloxy, -C(=S)-(C_1-C_6)alkyl or -C(=S)-aryl;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

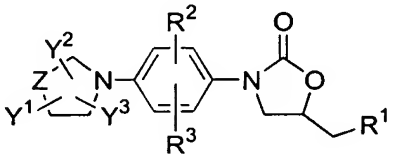
Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6) cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-

C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises: reacting the compound of formula (I) where R^1 represents NHR^4, wherein R^4 represents $-C(=O)-R^{4b}$, wherein R^{4b} represents (C_1-C_6)alkyl, halo(C_1-C_6)alkyl, -C(=O)-(C_1-C_6)alkoxy, -C(=O)-aryloxy, -C(=S)-(C_1-C_6) alkyl or -C(=S)-aryl; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, with 2,4-bis (methoxyphenyl)-1,3-dithia-2,4-diphosphetane-2,4-disulfide (Lawesson's reagent).

18. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

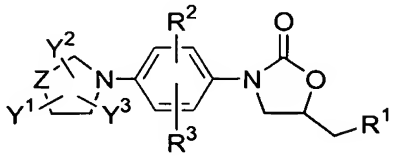
R^1 represents NHR^4, wherein R^4 represents $-C(=S)-SR^{4c}$ wherein (C_1-C_6)alkyl group;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6) alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6)cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl; Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises: reacting the compound of formula (I) where R^1 represents NHR^4, wherein R^4 represents hydrogen; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, by reacting with carbondisulfide, with an alkylhalide and a base selected from Et_3N, diisopropylethylamine, K_2CO_3, NaH or KOt-Bu.

19. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents $-C(=S)-OR^{4d}$, wherein R^{4d} represents (C_1-C_6)alkyl, cyclo(C_3-C_6)alkyl, $-(C=O)-(C_1-$

C_6) alkyl group substituted with fluorine; aryl, halo(C_1-C_6)alkyl, hydroxy(C_1-C_6) alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl or (C_2-C_6)alkenyl;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6) cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6)alkoxycarbonyl or aryloxycarbonyl;

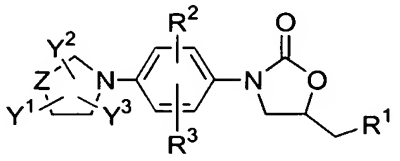
Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms; its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) converting compound of formula (I) where R^1 represents NHR^4, wherein R^4 represents hydrogen atom; Y^1, Y^2, Y^3, R^2, R^3 and Z are as defined above, to a compound of formula (I) where R^1 represents isothiocyanate group and all other symbols are as defined above, by reacting with thiophosgene and

(ii) converting compound of formula (I) where R^1 represents isothiocyanate group, to a compound of formula (I) where R^1 represents NHR^4, wherein R^4 represents $-C(=S)-OR^{4d}$, wherein R^{4d} represents (C_1-C_6)alkyl, cyclo(C_3-C_6)alkyl, $-(C=O)-(C_1-C_6)$alkyl group substituted with fluorine; aryl, halo(C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl or (C_2-C_6)alkenyl and all symbols are as defined above, by reacting with alcohol.

20. (previously presented) A process for the preparation of compound of formula (I)



(I)

where

R^1 represents NHR^4, wherein R^4 represents $-C(=S)-N(R'R'')$, R' represents hydrogen, (C_1-C_6)alkyl, (C_2-C_6)alkenyl, substituted or unsubstituted aralkyl, heteroaralkyl, hydroxy(C_1-C_6)alkyl, R'' represents hydrogen or (C_1-C_6)alkyl or R' and R'' together form a 5 or 6 membered cyclic structures containing one or two hetero atoms;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl; Z represents S, O, =CH or NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6)cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino (C_1-C_6)alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6)

alkylcarbonyloxy(C_1-C_6) alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino, arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises: converting compound of formula (I) where R^1 represents isothiocyante group and all other symbols are as defined above by passing ammonia gas or by reacting with amine.

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

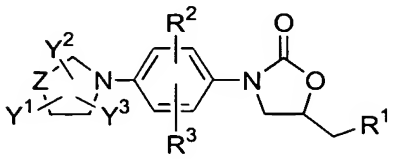
27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (original) A pharmaceutical composition comprising a compound of formula (I)



(I)

as claimed in claim 1 and a pharmaceutically acceptable carrier, diluent, excipient or solvate.

32. (original) A pharmaceutical composition as claimed in claim 31, in the form of a tablet, capsule, powder, syrup, solution or suspension.

33. (original) A method of treating a bacterial infection comprising administering a compound of formula (I) as claimed in claim 1 to a patient in need thereof.

34. (previously presented) A method of treating a bacterial infection comprising administering a pharmaceutical composition as claimed in claim 31 to a patient in need thereof.

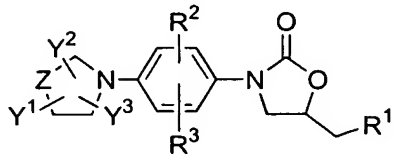
35. (original) A pharmaceutical composition comprising a compound as claimed in claim 6 and a pharmaceutically acceptable carrier, diluent, excipient or solvate.

36. (original) A pharmaceutical composition as claimed in claim 35, in the form of a tablet, capsule, powder, syrup, solution or suspension.

37. (original) A method of treating a bacterial infection comprising administering a compound as claimed in claim 6 to a patient in need thereof.

38. (previously presented) A method of treating a bacterial infection comprising administering a pharmaceutical composition as claimed in claims 35 to a patient in need thereof.

39. (original) A process for the preparation of compound of formula (I),



(I)

where

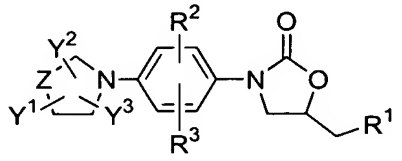
Z represents NR^b wherein R^b represents hydrogen, Y^1 represents =O group, Y^2 and Y^3 independently represent hydrogen atom, R^1 represents halo, azido, isothiocyanate, thioalcohol, OR^4, NHR^4 or $N(R^4)_2$ where R^4 represents hydrogen atom, or substituted or unsubstituted groups selected from acyl, thioacyl, $(C_1\text{-}C_6)$alkoxycarbonyl, $(C_3\text{-}C_6)$cycloalkoxythiocarbonyl, $(C_2\text{-}C_6)$ alkenyloxycarbonyl, $(C_2\text{-}C_6)$alkenylcarbonyl, aryloxycarbonyl, $(C_1\text{-}C_6)$ alkoxythiocarbonyl, $(C_2\text{-}C_6)$alkenyloxythiocarbonyl, aryloxythiocarbonyl, -C(=O)-C(=O)-alkyl, -C(=O)-C(=O)-aryl, -C(=O)-C(=O)-alkoxy, -C(=O)-C(=O)-aryloxy, -(C=S)-S-alkyl, -(C=S)-NH_2, -(C=S)-NH-alkyl, -C(=S)-N-$(alkyl)_2$, -C(=S)-NH-alkenyl, (C=S)-(C=O)-alkoxy, -(C=S)-(C=O)-aryloxy, -C(=S)-O-(C=O)-alkyl, C(=S)-C(=S)-alkyl, -C(=S)-C(=S)-aryl, thiomorpholinylthiocarbonyl or pyrrolidinylthiocarbonyl;

R^2 and R^3 may be same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises: reacting the compound of formula (I) where Z represents NR^b wherein R^b represents $(C_1\text{-}C_6)$alkyl group

substituted with hydroxy group at α-position, Y^1 represents =O group, Y^2 and Y^3 independently represent hydrogen atom and all other symbols are as defined above, with a base.

40. (previously presented) A process for the preparation of compound of formula (I),



(I)

where

Z represents NR^b wherein R^b represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl or aralkyl, Y^1 represents '=O group', Y^2 and Y^3 independently represent hydrogen atom;

R^1 represents halo, azido, isothiocyanate, thioalcohol, OR^4, NHR^4 or $N(R^4)_2$ where R^4 represents hydrogen atom, or substituted or unsubstituted groups selected from acyl, thioacyl, $(C_1\text{-}C_6)$ alkoxycarbonyl, $(C_3\text{-}C_6)$ cycloalkoxythiocarbonyl, $(C_2\text{-}C_6)$alkenyloxycarbonyl, $(C_2\text{-}C_6)$ alkenylcarbonyl, aryloxycarbonyl, $(C_1\text{-}C_6)$alkoxythiocarbonyl, $(C_2\text{-}C_6)$ alkenyloxythiocarbonyl, aryloxythiocarbonyl, -C(=O)-C(=O)-alkyl, -C(=O)-C(=O)-aryl, -C(=O)-C(=O)-alkoxy, -C(=O)-C(=O)-aryloxy, -(C=S)-S-alkyl, -(C=S)-NH_2, -(C=S)-NH-alkyl, -C(=S)-N-$(alkyl)_2$, -C(=S)-NH-alkenyl, (C=S)-(C=O)-alkoxy, -(C=S)-(C=O)-aryloxy, -C(=S)-O-(C=O)-alkyl, C(=S)-C(=S)-alkyl, -C(=S)-C(=S)-aryl, thiomorpholinylthiocarbonyl or pyrrolidinylthiocarbonyl;

R^2 and R^3 may be same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or

its pharmaceutically acceptable solvates; which comprises: reacting the compound of formula (I) where Z represents NR^b wherein R^b represents hydrogen, Y^1 represents =O group, Y^2 and Y^3 independently represent hydrogen atom and all other symbols are as defined above, with a base and alkyl halide or aralkyl halide.

41. (original) The compound according to claim 1, wherein the substituents on R^a are selected from hydroxy, halogen, nitro, amino, alkoxy, carboxy or cyano,

42. (original) A compound according to claim 7, wherein the salts of organic bases are selected from N,N'-diacetylethylenediamine, betaine, caffeine, 2-diethylaminoethanol, 2-dimethylaminoethanol, N-ethylmorpholine, N-ethylpiperidine, glucamine, glucosamine, hydrabamine, isopropylamine, methylglucamine, morpholine, piperazine, piperidine, procaine, purines, theobromine, triethylamine, trimethylamine, tripropylamine, tromethamine, diethanolamine, meglumine, ethylenediamine, N,N'-diphenylethylenediamine, N,N'-dibenzylethylenediamine, N-benzyl phenylethylamine, choline, choline hydroxide, dicyclohexylamine, metformin, benzylamine, phenylethylamine, dialkylamine, trialkylamine, thiamine, aminopyrimidine, aminopyridine, purine, or spermidine.

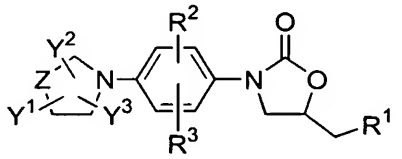
43. (original) A compound according to claim 7, wherein the salts of chiral bases are selected from alkylphenylamine, glycinol, phenyl glycinol.

44. (original) A compound according to claim 7, wherein the salts of natural amino acids are selected from glycine, alanine, valine, leucine, isoleucine, norleucine, tyrosine, cystine, cysteine, methionine, proline, hydroxy proline, histidine, ornithine, lysine, arginine, serine, threonine, or phenylalanine.

45. (original) A compound according to claim 7, wherein the salts of unnatural amino acid, substituted amino acids are selected from D-isomers, guanidine, substituted guanidine wherein the substituents are selected from nitro, amino, alkyl selected from methyl, ethyl, and propyl; alkenyl selected from ethenyl, propenyl, or butenyl; alkynyl selected from ethynyl, or propynyl.

46. (original) A compound according to claim 7, wherein the addition salts are selected from sulphates, nitrates, phosphates, perchlorates, borates, halides, acetates, tartrates, maleates, citrates, succinates, palmoates, methanesulphonates, benzoates, salicylates, hydroxynaphthoates, benzenesulfonates, ascorbates, glycerophosphates, or ketoglutarates.

47. (previously presented) A process for the preparation of compound of formula (I),



(I)

where

R^1 represents halogen atom;

R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, $(C_1\text{-}C_6)$alkyl group, halo$(C_1\text{-}C_6)$alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted $(C_1\text{-}C_6)$alkyl group, or halo$(C_1\text{-}C_6)$alkyl;

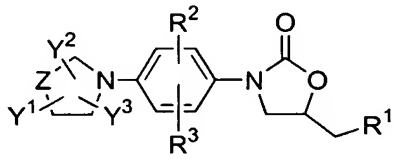
Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_1\text{-}C_6)$cycloalkyl, $(C_1\text{-}C_6)$alkoxy, aryl, aralkyl, aryloxy, $(C_1\text{-}C_6)$alkylcarbonyl, arylcarbonyl, $(C_1\text{-}C_6)$ alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from $(C_1\text{-}$

C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms, its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises: reacting a compound of formula (I) where R^1 represents hydroxy group and all other symbols are as defined above, with tetrahalomethane group and PPh_3 or $P(alkyl)_3$.

48. (previously presented) A process for the preparation of compound of formula (I),



(I)

where

R^1 represents SH group;

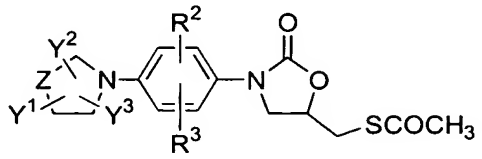
R^2 and R^3 are same or different and independently represent hydrogen, halogen atom, (C_1-C_6)alkyl group, halo(C_1-C_6)alkyl, cyano, nitro, SR^a, NR^a, OR^a where R^a represents substituted or unsubstituted (C_1-C_6)alkyl group, or halo(C_1-C_6)alkyl;

Z represents NR^b where R^b represents hydrogen, or substituted or unsubstituted (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_1-C_6)cycloalkyl, (C_1-C_6)alkoxy, aryl, aralkyl, aryloxy, (C_1-C_6)alkylcarbonyl, arylcarbonyl, (C_1-C_6) alkoxycarbonyl or aryloxycarbonyl;

Y^1 represents =O or =S group and Y^2 and Y^3 independently represent hydrogen, halogen, cyano, nitro, formyl, hydroxy, amino, =O, =S group, or substituted or unsubstituted groups selected from (C_1-C_6)alkyl, hydroxy(C_1-C_6)alkyl, (C_1-C_6)alkoxy(C_1-C_6)alkyl, (C_1-C_6) alkoxycarbonyl, carboxy(C_1-C_6)alkyl, (C_1-C_6)alkylsulfonyl, (C_1-C_6) alkylcarbonylamino(C_1-C_6) alkyl, arylcarbonylamino(C_1-C_6)alkyl, (C_1-C_6) alkylcarbonyloxy(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, mono(C_1-C_6)alkylamino, di(C_1-C_6)alkylamino arylamino, (C_1-C_6)alkoxy, aryl, aryloxy, aralkyl, heteroaryl, heteroaralkyl, heterocyclyl or heterocycloalkyl;

Y^2 and Y^3 when present on adjacent carbon atoms together also form a substituted or unsubstituted 5 or 6 membered aromatic or non-aromatic cyclic structure, optionally containing one or two hetero atoms, its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts or its pharmaceutically acceptable solvates; which comprises:

(i) reacting the compound of formula (I) where R^1 represents halogen atom, to produce a compound of formula (XX),



(XX)

where all symbols are as defined above, with a base and thioacetic acid,

(ii) reacting the compound of formula (XX), to produce a compound of formula (I) where R^1 represents SH group and all other symbols are as defined earlier, with base.

49. (previously presented) A compound according to claim 6, wherein the pharmaceutically acceptable salt is selected from the group consisting of Li, Na, K, Ca, Mg, Fe, Cu, Zn, or Mn; salts of organic bases, chiral bases, natural amino acids, unnatural amino acids, substituted amino acids, guanidine, substituted guanidine salts; ammonium, substituted ammonium salts, aluminum salts and acid addition salts.

50. (previously presented) A compound according to claim 49, wherein the salts of organic bases are selected from N,N'-diacetylethylenediamine, betaine, caffeine, 2-diethylaminoethanol, 2-dimethylaminoethanol, N-ethylmorpholine, N-ethylpiperidine, glucamine, glucosamine, hydrabamine, isopropylamine, methylglucamine, morpholine, piperazine, piperidine, procaine, purines, theobromine, triethylamine, trimethylamine, tripropylamine, tromethamine, diethanolamine, meglumine, ethylenediamine, N,N'-diphenylethylenediamine, N,N'-dibenzylethylenediamine, N-benzyl phenylethylamine, choline, choline hydroxide, dicyclohexylamine, metformin, benzylamine, phenylethylamine, dialkylamine, trialkylamine, thiamine, aminopyrimidine, aminopyridine, purine, or spermidine.

51. (previously presented) A compound according to claim 43, wherein the salts of chiral bases are selected from alkylphenylamine, glycinol, phenyl glycinol.

52. (previously presented) A compound according to claim 49, wherein the salts of natural amino acids are selected from glycine, alanine, valine, leucine, isoleucine, norleucine, tyrosine, cystine, cysteine, methionine, proline, hydroxy proline, histidine, ornithine, lysine, arginine, serine, threonine, or phenylalanine.

53. (previously presented) A compound according to claim 49, wherein the salts of unnatural amino acid, substituted amino acids are selected from D-isomers, guanidine, substituted guanidine wherein the substituents are selected from nitro, amino, alkyl selected from methyl, ethyl, and propyl; alkenyl selected from ethenyl, propenyl, or butenyl; alkynyl selected from ethynyl, or propynyl.

54. (previously presented) A compound according to claim 49, wherein the addition salts are selected fromsulphates, nitrates, phosphates, perchlorates,

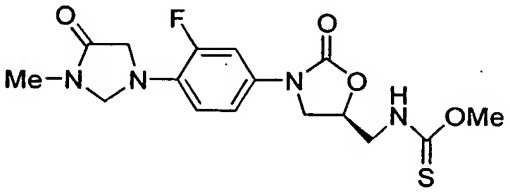
borates, halides, acetates, tartrates, maleates, citrates, succinates, palmoates, methanesulphonates, benzoates, salicylates, hydroxynaphthoates, benzenesulfonates, ascorbates, glycerophosphates, or ketoglutarates.

55. (previously presented) A method of treating a bacterial infection comprising administering a pharmaceutical composition as claimed in claim 32 to a patient in need thereof.

56. (previously presented) A method of treating a bacterial infection comprising administering a pharmaceutical composition as claimed in claim 36 to a patient in need thereof.

Please add the following new claims.

57. (new) A compound of the formula



or a salt thereof.

58. (new) A composition comprising the compound of claim 57 or a salt thereof and a pharmaceutically acceptable carrier, diluent, excipient or solvate.

59. (new) A composition as claimed in claim 58 in the form of a tablet, capsule or powder.

60. (new) A composition as claimed in claim 58 in the form of a syrup, solution or suspension.